ENFORCEMENT CONFIDENTIAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

ORIGINAL (Red)

SUBJECT: Summary of CERCLA § 104e Responses
Hanlin-Allied Site

DATE: 6-17-94

FROM: Joan Armstrong, Civil Investigator
PRP Search Section (3HW11)

TO: File

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Below is a summary of the CERCLA § 104(e) responses received from Olin Corporation, Ohio Valley Industrial & Business Development Corporation, Union Carbide Corporation, and AlliedSignal regarding the Hanlin-Allied Site.

Olin Corporation: On June 6, 1994, Olin Corporation ("Olin") submitted an interim response to EPA's May 11, 1994, CERCLA § 104(e) letter. Olin answered questions 1 through 4 and advised they would respond to questions 5 through 10 by June 24, 1994. Olin advised that it purchased a portion of the Site from Allied on October 26, 1981 (deed is dated October 22, 1981). Olin currently owns this portion of the Site, however they ceased operations. Olin operated a chemical manufacturing plant from October 26, 1981 to December 31, 1984. The operations included manufacturing toluene diisocyanate, hydrochloric acid (as a by-product of TDI) miscellaneous TDI products and methylene dianiline. Olin also manufactured the following three materials, primarily for the use in the manufacture of TDI: dinitrotoluene, toluene diamine, and phosgene. In 1987 Olin sold a parcel of land to Hanlin which contained three 500,000 gallon tanks. Olin advised that at the time of the purchase of the property from Allied, Allied operated a TDI production facility which was comprised of the following operations: dinitrotoluene, toluene diisocyanate ("TDI"), phosgene, hydrochloric acid, methylene dianiline, and also blended TDI with miscellaneous polyols.

Ohio Valley Industrial and Business Development Corporation: On June 10, 1994, Ohio Valley Industrial and Business Development Corporation ("OVIBDC") responded to EPA's May 11, 1994, CERCLA § 104(e) letter. OVIBDC advised that it never owned or operated any portion of the Site. OVIBDC advised that Ohio Valley Industrial Corporation ("OVIC"), to whom EPA's letter was addressed, was dissolved in 1960. OVIBDC denies it is a successor to OVIC. Shortly after it dissolved, OVIC transferred its corporate minutes to OVIBDC for informational purposes only. From the corporate minutes, OVIBDC advised that it appears OVIC

purchased farmland from various individuals in 1947-1948. In 1952, the land was sold to Allied. According to OVIBDC, no industrial operations occurred on this land prior to Allied. OVIBDC attached its articles of incorporation and various corporate minutes from OVIC.

Union Carbide Corporation: On May 18, 1994, Union Carbide Corporation ("UCC") responded to EPA's April 26, 1994 CERCLA § 104(e) letter. UCC advised that it purchased 11 acres in 1955 from Allied Chemical & Dye Corporation (now AlliedSignal) in order to build an acetylene manufacturing plant on the property. According to UCC, the purpose of this operation was to provide acetylene and lime slurry to Allied, via pipelines. Allied owned and operated an adjacent plant which used the acetylene to manufacture vinyl chloride. UCC provided a copy of an Agreement dated April 1, 1960 between UCC, by its Division Union Carbide Olefins Company, and Allied Chemical Corporation, by its Solvay Process Division, (this agreement references two earlier agreements in 1955 and 1957, however UCC could not locate these documents). The Agreement states that UCC is to provide Allied acetylene (75,000,000 cubic feet per month). The Agreement also specifies that UCC was "to deliver to Solvay's [Allied's] lime slurry pipeline leading to Solvay's [Allied's] sludge basins adjacent to the Acetylene Plant . . ." Further, the Agreement states that when UCC has produced "said quantity of acetylene in a given calendar year, UCC will either remove from the premises all additional lime slurry resulting from the manufacturing of acetylene or deliver it to Solvay's [Allied's] sludge basin, but if UCC elects to deliver it to the sludge basin it shall upon such delivery become Sovay's [Allied's] property and UCC shall not thereafter assert any claim therefor." UCC also provided copies of various correspondence between Allied and UCC negotiating such Agreement.

According to UCC it used calcium carbide (which came from a former UCC plant in Ohio) and water to generate acetylene and calcium hydroxide (lime slurry). UCC provided current MSDSs for acetylene and calcium hydroxide, however, UCC stated that this information may be of limited value since the substances identified in the MSDSs concerns acetylene in cylinders, and the acetylene provided to Allied was delivered by pipeline.

UCC has been unable to locate any documents regarding by-products or waste produced by UCC's operations. UCC stated that both acetylene and lime slurry were products and calcium hydroxide was a co-product. According to the former plant manager Irus P. Main, to the best of his recollection, UCC never spilled or caused a release of any chemicals, hazardous substances or hazardous wastes on Site.

UCC ceased operations on October 6, 1967 because Allied canceled the contract for UCC to provide acetylene to Allied. On March 8, 1968, title and easement interests were conveyed back to Allied (this was a clause in the Agreement that Allied would have

first option at buying back the facility).

AlliedSignal (formerly known as Allied Chemical & Dye Corporation and Allied Chemical Corporation): By letter dated June 10, 1994, (received June 15, 1994), AlliedSignal ("Allied") responded to EPA's May 11, 1994, CERCLA § 104(e) letter. According to Allied it acquired the land comprising of the Site in 1952 from various individuals. The Site was farmland prior to Allied purchasing it. Allied's operations included:

December 12, 1953: Chlorine/caustic soda installation produced by electrolysis of a saturated salt solution in a mercury cell (the salt came from brine wells on Site, 6,500 feet deep).

Mid 1954: Chloromethane, natural gas was reacted with chlorine to produce: methyl chloride, methylene chloride, chloroform, and carbon tetrachloride along with by-product hydrogen chloride.

1956: Vinyl Chloride plant was added to consume by-product, acid. The vinyl chloride was produced by reacting hydrogen chloride and acetylene. Acetylene was produced "on site and purchased from Union Carbide." In 1967 the Vinyl Chloride plant was shut down and the acid was then reacted with methanol to produce methyl chloride.

Allied used the following substances in its operations:

acetylene*, mercury, methane*, methanol*, potassium carbonate, propylene oxide, salt*, sodium carbonate, sulfuric acid zinc chloride. (* = raw material)

The following is a list of products produced by Allied:

carbon tetrachloride, chlorine, chloroform, hydrochloric acid, hydrogen, methyl chloride, methylene chloride, sodium hydroxide, vinyl chloride.

According to Allied's response it cannot locate any information responsive to questions number 6 and 7 in EPA's CERCLA § 104(e) letter (which asked for the identity of all by-products and wastes and methods used by Allied to dispose of or treat such by-products and waste).

Allied provided documents regarding 12 spill/releases to water/land and provided information regarding 3 releases to air.

The following is a brief summary of the spill/releases:

10/29/76: Sodium chloride brine/mercury discharge: a fiberglass reinforced polyester tank ruptured and 27,000 gallons of saturated sodium chloride brine emptied into a curbed containment area. Approx. 5,000 gallons spilled over the

containment area and discharged to the Ohio River at Outfall 001. (Content of mercury in brine 5.70 ppm).

02/18/77: 55 gallons of Mobile DTE medium lubricating oil were discharged to the Ohio River at Outfall 001 when an employee was lifting a 55 gallon drum with a chain hoist and it fell and ruptured. Oil entered the floor drain.

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03/04/77: 15,000 gallons of sodium chloride brine (containing .086 mercury) was discharged to Ohio River at Outfall 001 when a defective valve on a tank was being replaced and brine spilled over the roof into the floor drain.

03/25/77: A power failure in the chloromethane production area resulted in the loss of the reflux pump. A drum which accumulated condensed carbon tetrachloride failed and overflowed. Some liquid founds it way to the plant's storm sewer system. Allied estimated 40 gallons released to Outfall 001.

03/28/77: A grab sample at Outfall 001 showed higher level than normal of carbon tetrachloride. The source was located which was a leaking mechanical seal on a process pump, which pumped bottoms from chloroform distillation unit. Outfall grab samples continued to show elevated levels of carbon tetrachloride, and Allied continued its search for a source and found a leaking tube in the carbon tetrachloride vent condenser. The leak resulted in small quantities of carbon tetrachloride entering Outfall 001.

04/02/77: A grab sample at Outfall 001 showed higher than normal levels of carbon tetrachloride. The source was not definitely verified, however Allied believed it to be from a reflux drum overflowing. Allied estimated approximately 26 gallons entered the Ohio River.

07/24/77: A 100,000 gallon steel tank containing saturated 25% sodium chloride brine, ruptured. 64,000 gallons were discharged to the Ohio River via Outfall 001.

11/09/77: 2,800 lbs. of chloride entered the Ohio River by Allied's barge loading dock which was caused from a break in the 6" line from Allied's brine well.

04/01/78: 50 gallons of No. 2 fuel oil was discharged to the Ohio River when a sight gauge on the fuel oil tank was blown down by high winds. Approximately 150 gallons entered plant sewer system, and 50 gallons entered Outfall 001.

12/01/78: 1,000 gallons of sodium chloride brine was discharged to Outfall 001 when a polyethylene line failed during the transfer of waste brine solution from the brine saturation process to the mercury treatment facilities (sample: .05 mercury, 109,900 lbs. chloride).

08/08/79: 24,000 gallons of 25% sodium chloride brine solution was discharged to the Ohio River when a 4" steel riser failed. This riser lead from the production brine wells to the pump house facility. Approx. 36,000 lbs. of chloride discharged to the Ohio River (Allied was permitted to discharge 171,659 lbs.).

09/18/79: 4,600 gallons of 255 sodium chloride brine was discharged to the Ohio River via Outfall 001 which was caused by an operator error. During a routine brine filter back wash, a valve was left open and 40,000 gallons drained from storage. The solution was discharged to a confined area, but approx. 4,600 gallons spilled over the containment area.

The 3 releases of chlorine to the air occurred 04/20/74, 06/02/78, and 051679.

Allied did not provide any answers to questions 9 and 10 dealing with environmental assessments/investigations and sampling activities.

A separate memo will be provided to summarize Olin's supplemental response.

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